

REMARKS

Any arguments made herein are only to be considered as to the claims to which the argument is directed. No estoppel is intended or should be taken to any other claims to which the arguments herein are not specifically directed.

Claims 1, 2, 6, 8, 10, 13, 14, 17, and 18 remain in this application. Claims 3, 4, 5, 7, 9, 11, 11, 12, 15, 16, and 19 through 33 inclusive have been canceled.

ARGUMENTS

Prior to discussing the nature of the rejections the applicant feels that a brief review of the claimed invention will be the Examiner in determining the differences between that which is claimed and the cited art.

The present invention sets forth a method for determining the level of a carbonated fluid in a container having at least two fluids therein. A difficulty arises because as the head space increases the carbonated fluid will release carbon dioxide thereby causing foaming. The foaming is in addition to the second fluid in the container. The foam is neither purely carbon dioxide nor the first carbonated fluid. The foam is a third phase in the container having its own heat transfer characteristics. Thus, it is difficult if not impossible to determine the level of the first carbonated fluid in the container with a temperature measuring strip.

In the claimed method according to claim 1, the first carbonated fluid is at least partially removed from the container while introducing carbon dioxide to the container which reduces the tendency for foaming. Effectively, the claimed method lessens the tendency for the foam to form and interfere with the accurate detection of the level of the first carbonated fluid in the container.

None of the cited art recognizes the problem that the applicant has solved. None of the cited art provides any motivation to solve the problem that the applicant has solved.

Discussion of the 35 U.S.C. 103 Rejections

The Examiner has rejected claims 1 through 3 inclusive 10, 11, and 13 obvious over United States Patent 5,165,569 to Furuhashi et al., (hereinafter the Furuhashi et al. patent) in view of United States Patent 5,894,089 to Ogawa (hereinafter the Ogawa patent). The Examiner previously rejected the foregoing claims as obvious based the Furuhashi et al. patent in view of the United States Patent 6,260,414 to Brown et al. (hereinafter the Brown et al. patent). It is taken as an admission by the Examiner that the withdrawal of this case from appeal with the issuance of the present Official Action that the Furuhashi et al. patent in view of the Brown et al. patent did not render claims 1 through 3 inclusive 10, 11, and 13 obvious.

Claim 1, and accordingly dependent claims 2, 10, 11, 13, 17 and 18 have been amended to recite a method in which the temperature-measuring device in the form of an elongated thin strip is mounted on an exterior surface of the container in which the level of the liquid is to be measured.

For all of what the Examiner would have the Furuhashi et al. patent disclose it comes down to the reference merely teaching a beer keg. There is no disclosure of measuring anything at time in the Furuhashi et al. patent. There is no recognition in the Furuhashi et al. patent of a problem occurring in the liquid volume measurement if foaming occurs.

It seems axiomatic that if the Furuhashi et al. patent does not recognize that a problem occurs that one of ordinary skill in the art cannot solve that problem. Thus, one of ordinary skill in the art must look elsewhere to even recognize the foaming problem and must then find a solution to the foaming problem as it effects determining the level of a carbonated fluid in a beer keg.

The Ogawa patent does not recognize a foaming problem in a beer keg and thus cannot provide motivation to find a solution to the foaming problem regarding determining the level of a carbonated fluid in a beer keg. It is also noted that claim 1 has been amended to provide that the temperature-measuring device is an elongated thin

strip mounted on an exterior surface of the container in which the level of the liquid is to be measured. The Ogawa patent utilizes a cumbersome system amounting to a water pitcher (transparent vessel) with a thermo-sensitive tape on the outer surface of the water pitcher. The Ogawa patent requires that the water pitcher with the thermo-sensitive tape be pressed against the container in which the fluid is to be measured. The Ogawa patent never mentions carbon dioxide so this reference cannot recognize the importance of having a first carbonated fluid at least partially removed from the container while introducing carbon dioxide to said container thereby forming a second carbonated fluid region. Thus, the Ogawa patent adds nothing to the disclosure of the Furuhashi et al. patent and claim 1, and accordingly dependent claims 2, 10, 11, and 13 are patentable over the combination of the references which neither recognize nor solve the problem of determining the level of a fluid while minimizing foaming.

The Examiner has rejected claims 6 and 13 as obvious based the Furuhashi et al. patent in view of the Ogawa patent further in view of United States Patent 4,358,955 to Rait (hereinafter the Rait patent). It is taken as an admission by the Examiner that the prior obviousness rejection of claims 6 and 13 based on the Furuhashi et al. patent in view of the Brown et al. patent was not proper.

Claim 6 requires that the temperature-measuring device be adhered to an outer surface of the container as a magnetic strip. Claim 6 is a method of use claim. The Rait patent discloses a propane tank. No one skilled in the art would place the carbon dioxide in a propane tank. The Rait patent does not disclose the addition of one fluid to a tank while removing a second fluid. In fact it is apparent that the Rait patent only permits propane to flow through a single valve 14 whereas the instant method claims require removing from the container a first carbonated fluid while introducing carbon dioxide to the container. The mere fact that magnetic strips of any kind exist does not render the claimed method obvious. One might also question what one would do with the opposite teachings of the Rait patent and the Ogawa patent. One could not adhere the magnetic strip of the Rait patent to a water pitcher made of a hard plastic material

or polyester (Ogawa patent column 3, lines 24-32). Thus, the Rait patent does not recognize let alone solve the problem to which the present invention is directed.

Claim 13 recites the method of claim 1 where the temperature-measuring device is wiped with a water moistened cloth wherein the temperature of the water moistened cloth is less than 105 ° F. It is true that the Rait patent discloses wiping with a damp cloth but nothing therein discloses a temperature of less than 105 ° F. The actual teachings of the Rait patent are:

If it is desired to read the liquid level at other times the tank 12 may be exposed to a temperature change by applying water, either warmer than the ambient temperature or colder than the ambient temperature (depending upon the particular thermochromatic material used) to the surface of wall 18 of tank 12 at the area at which the liquid level gauge 20 is affixed. (Column 3, lines 52-64).

The Examiner must either point to a specific teaching in the Rait patent of wiping a temperature measuring device with a cloth at a temperature of less than 105 ° F or retract the statement made in the paragraph bridging pages 5 and 6 of the present Official Action. It cannot be obvious to do anything at the temperature range as recited in claim 13 when the temperature range does not exist in any applied reference.

It is also noted that one skilled in the art would at best be motivated by the references applied (Furuhashi et al. patent in view of the Ogawa patent further in view of the Rait patent) to wipe the water pitcher of the Ogawa patent. If one combines the teachings of Furuhashi et al. patent and the Ogawa patent there is no possibility of wiping a temperature measuring device as recited in the applicant's method claim as the temperature measuring device of the combined references is between the water pitcher and the keg.

The Ogawa patent further requires a user to find the water pitcher of the Ogawa patent and then to find a source of hot water to fill the water pitcher. See the applicant's method claim 13 where the water moistened cloth is employed without the need for device of the Ogawa patent.

Therefore, the rejection of claim 13 based the Furuhashi et al. patent in view of the Ogawa patent further in view of the Rait patent should be removed.

The Examiner has rejected claim 8 based on the Furuhashi et al. patent in view of the Ogawa patent further in view of United States Patent 4,339,207 to Hof et al. (hereinafter the Hof et al. patent). It is taken as an admission by the Examiner that the prior obviousness rejection of claim 8 based on the Furuhashi et al. patent in view of the Brown et al. patent further in view the Hof et al. patent was made in error.

Nothing in the combined teachings of the Furuhashi et al. patent, the Ogawa patent, and the Hof et al. patent disclose a first carbonated fluid being at least partially removed from a container while introducing carbon dioxide to the container. Thus, there is no recognition of the problem or the solution to the foaming problem as discovered and corrected by the applicant. Therefore, the rejection of claim 8 based on the Furuhashi et al. patent in view of the Ogawa patent further in view of the Hof et al. patent should be removed.

The Examiner has rejected claim 14 based on the Furuhashi et al. patent in view of the Ogawa patent further in view of United States Patent 4,690,299 issued to Cannon (hereinafter the Cannon patent). It is taken as an admission by the Examiner that the prior obviousness rejection of claim 14 based on the Furuhashi et al. patent in view of the Brown et al. patent further in view of the Cannon patent was not proper.

Claim 14 requires that the method of determining the level of the first carbonated fluid in the container while the pressure within said container is about 5 pounds per square inch to about 100 pounds per square inch at 70 °F. The Examiner cites the Cannon patent as teaching a beer keg having a pressure of 5 to 100 psi. There is no such teaching in the Cannon patent. The Cannon patent teaches a keg which should withstand a certain pressure not that the keg is under such pressure. Moreover, the method of claim 14 is to determine the level of the first fluid in the container while the pressure within said container is about 5 pounds per square inch to about 100 pounds per square inch at 70 °F. The Cannon patent never mentions what temperature is

employed in making the pressure measurement. The Examiner must explain how he has such knowledge from outside of the reference. The Examiner must cite a reference, or declare his personal knowledge in a declaration made under 37 C. F. R. 1.104, or remove the foregoing rejection. The Examiner should not confuse the concept of inherency in making an obviousness rejection. The rejection of claim 14 based on Furuhashi et al. patent in view of the Ogawa patent further in view of the Cannon patent should be removed.

Device claims 17 and 18 formerly dependent from cancelled claim 15 are now rewritten as method claims dependent from claim 1. Thus, no discussion of method claims 17 and 18 is made at this time.

Discussion of the Declaration under 37 C. F. R. 1.132

The applicant encloses the declaration of John J. Staunton. The declaration supports the arguments of the applicant that the pressure must be maintained in a beer keg as set forth in claim 1 or an inaccurate volume will be reported. Mr. Staunton's experiments demonstrate that unless the method of claim 1 is followed the volume of the first carbonated fluid will be incorrectly determined to be 20 per cent more than the actual volume in the keg. If the volume is incorrect then there is no reason for one to utilize the claimed method. The cited references do not recognize nor render obvious the claimed method. Moreover, a device according to the Rait patent failed to detect any volume whatsoever when tested side by side with the applicant's invention.

The applicant has provided arguments and a factual basis as to the deficiencies of the cited references thereby overcoming any prima facie case of obviousness.

Summary

Claims 1, 2, 6, 8, 10, 13, 14, 17, and 18 remain pending and reconsideration is requested, and removal, of the rejections made in the present Official Action. Should questions concerning this application arise the Examiner is urged to telephone the undersigned to advance prosecution of this application. The applicant believes the application is in condition for allowance and such is earnestly solicited.

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